

Range Extensions of *Conualevia alba* Collier & Farmer, 1964

BY

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*Conualevia alba* Collier & Farmer, 1964, was first described from the rocky mud flats of Newport Bay (lat. 33°36'N, long. 117°54'W) where it was found to occur rather abundantly during the months of November and December. LANCE (1966) reported finding this cryptobranch at Point Loma, San Diego County (lat. 32°40'N, long. 117°14'W) and under stones at Bahía Tortuga, Baja California, Mexico (lat. 27°41'N, long. 114°53'W) along the outer coast of Lower California. A range extension north from Newport Bay was recorded by SPHON & LANCE (1968) with the observation of *C. alba* at Tajiguas (lat. 34°20'N, long. 120°08'W) and Coal Oil Point, Santa Barbara County, California, in 15 to 30 feet [4.5 to 9 m] of water.

The collections reported here extend the known range of *Conualevia alba* substantially both to the north and to the south, and to depths not hitherto indicated. The first specimen of *C. alba* was found under a fairly large stone in the intertidal zone on the northern side of Bahía de Banderas, Nayarit, Mexico (lat. 20°40'N, long. 105°17'W) on March 21, 1971 while we were collecting at Manzanilla. In all of its external features, this specimen conformed well to the original description. However, the animal was 10-gilled-bipinnate (not 8-gilled-tripinnate, as indicated in the original description); also it was considerably larger than previously reported specimens, measuring 30 mm in length and 24 mm in width while at rest on a rock, whereas Collier & Farmer's largest specimen was said to have been 24×14 mm while actively crawling. The notum of the Nayarit specimen was uniformly papillose (Collier & Farmer noted that the notum of these animals is quite variable, in some entirely smooth, papillose in others) with papillae about 0.1 - 0.2 mm in diameter. Around the margin of the notum there were several white glands in a row, more abundant on the right side. This specimen has been deposited with the California Academy of Sciences, Department of Invertebrate Zoology (CASIZ) collection, together with 35 mm color slides (CASIZ nos. 2573 - 2577, incl.).

The northerly find occurred on August 19, 1971, at Cypress Point (lat. 36°35'N, long. 121°59'W), Pacific

Grove, Monterey County, California. While SCUBA-diving with Gene Daily and Robert Western, Sr., from the R/V *Kiwi*, as part of the research activities of the Beta Research Oceanographic Laboratories, we came across a small white dorid that later was identified as *Conualevia alba*. The animal was found in 50 feet [15 m] of water on a rocky substratum covered mostly with coralline algae. The time was about noon, on a very calm but overcast day. The specimen measured 12×7 mm while crawling actively. However, when disturbed, the animal was observed to stop and contract, becoming virtually circular with dimensions of 9×9 mm. The notum was papillose, with papillae closely set, uniform in appearance and size (0.1 - 0.2 mm). The body was quite translucent, and under appropriate tangential light it seemed as if light-catching white lines (spicules?) tended to converge towards the papillae, making for a star-like effect. The rhinophores were smooth, rounded at the tip, yellowish in color, and when fully extended about 1 mm in length and 0.3 mm in average width. Along the right border of the notum there were about 6 white dots (glands) in a row. In all respects, then, the specimen corresponded to the original description of *Conualevia alba*, with only one notable exception: the gill branches, 8 in number, were unipinnate instead of tripinnate.

On August 22, 1971 a second specimen was found, in Monterey Bay. While SCUBA-diving from the Janss Foundation's R/V *Searcher*, a specimen was found in 55 feet [16.5 m] of water on Chase Reef, slightly east of Aumentos Rock (lat. 36°38'N, long. 121°55'W) in Monterey Bay. The animal was motionless, clinging to the underside of a rock. It was virtually identical with the one found at Cypress Point. In the laboratory it measured 13 mm in length, 7 mm in width, and 3.5 mm in height. It had numerous glands along the margin of the notum, on both sides, showing as conspicuous opaque white dots measuring as much as 0.3 mm in diameter. The gills were 9-branched, unipinnate.

Both specimens were kept alive in the laboratory for 4 days prior to being preserved. During this, time they were seen crawling about very slowly, their speed never ex-

ceeding 1 cm per minute. They were also observed floating upside down, suspended from the water surface for long periods.

Both specimens have been deposited in the California Academy of Sciences, Department of Invertebrate Zoology collections, together with 35 mm color slides (CASIZ nos. 2578 - 2582, incl.).

MARCUS & MARCUS (1967) indicated that the genus *Conualevia* seemed to be restricted to the coast of California south of Point Conception. The observations here reported extend the range of *Conualevia alba* some 1000 miles [1600 km] to the south and 350 miles [560 km] to the north of the previously reported range (LANCE, 1966; SPHON & LANCE, 1968; KEEN, 1971) to waters much colder and depths much greater than heretofore known.

The specimens here reported did not quite completely conform to Collier & Farmer's description as to the number of branches and division of the gills. Whether these variations in the branching and pinnation of the gills are of taxonomic significance remains to be seen.

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